Hiroyuki KASHIWADANI*: ***Pleurotheliopsis erigens*, a new lichen species from the Bonin Islands**

柏谷博之*: 小笠原諸島産地衣の 1 新種 *Pleurotheliopsis erigens*

The genus *Pleurotheliopsis* belongs to the family Paratheliaceae (Zahlbruckner 1926). In the genus, six species are known at present and they seem to be widely distributed in tropical and subtropical regions in the world. However, these species have not been fully revised taxonomically, though they seem to be rather common in tropical rainforests. In external appearance, *Pleurotheliopsis* resembles other pyrenocarpous lichen genera such as *Pleurotrema*, *Parathelium*, *Anthracothecium*, and *Parmentaria*. However, it is separated from other genera by the presence of oblique ostioles and by the production of muriform brown spores.

The genus *Pleurothelium*, was proposed by Müller Argoviensis (1885) for three species, *Pleurothelium dissimulans* Müll. Arg., *P. inclinatum* Müll. Arg., and *P. salvatum* Müll. Arg. However, *Pleurothelium* Müll. Arg. (1885) is a later homonym of *Pleurothelium* Müll. Arg. (1877), which includes two species of *Parathelium* in the present sense. Consequently, Zahlbruckner (1922) proposed the generic name *Pleurotheliopsis* as a new name for *Pleurothelium* Müll. Arg. (1885) and reduced *Pleurothelium* Müll. Arg. (1877) as a synonym of *Parathelium*.

Six species of *Pleurotheliopsis* known at present are *P. asahinae* Zahlbr., *P. australiensis* (Müll. Arg.) Zahlbr., *P. dissimulans* (Müll. Arg.) Zahlbr., *P. inclinatus* (Müll. Arg.) Zahlbr., *P. nana* Zahlbr., and *P. salvata* (Müll. Arg.) Zahlbr. Among them, the only one species reported from eastern Asia is *P. asahinae*.

Recently the writer found a well developed colony of *Pleurotheliopsis* in the Bonin Islands, located about 1000 km south of Japan proper. Critical study of the lichen proved to be a new species. In the present paper, the lichen will be described as new to science, giving the name *P. erigens* Kash.

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perithecia of pyrenocarpous lichens. I am also indebted to Dr. D. L. Hawksworth of the Commonwealth Mycological Institute in Kew for his useful advices of morphology of perithecia. My cordial thanks are due to Dr. J. Miège of Conservatoire et Jardin Botaniques in Genève and Dr. U. Passauer of Naturhistorisches Museum in Wien for the loan of the type specimens.

Pleurotheliopsis Zahlbr., Cat. Lich. Univ. 1 : 512, 1922.

Pleurothelium Müll. Arg. in Engler, Bot. Jahrb. **6** : 387, 1885 (non Müll.-Arg. 1877).

Lectotype: *Pleurothelium salvatum* Müll. Arg. [=*Pleurotheliopsis salvata* (Müll. Arg.) Zahlbr.].

Pleurotheliopsis is characterized by having the crustose thallus containing *Trentepohlia* as gonidia and the simple perithecium with a oblique ostiole opening by a lateral pore and by producing the brown muriform spores. Because of the presence of oblique ostioles and brown muriform spores, it seems to be closely related to *Parmentaria.* However, it differs from the latter genus by the absence of stroma, which is a characteristic feature of *Parmentaria.*

The so-called exciples of the Pyrenocarpeae are, as already discussed by S. Kurokawa (1955), mainly composed of two different tissues; proper exciple and involucrellum. These two tissues are often undistinguishable from each other, because both of them are black-pigmented or carbonized. However, they seem to have different origin; the proper exciple is derived from the primordium and the involucrellum from the thallus.

In *Pleurotheliopsis,* the involucrellum is usually well developed and carbonized and covers thickly whole exciple from the top to the base of the proper exciple. It is entire in most species of the present genus, while it is fissurred at the dorsal part in *P. dissimulans.* In contrast, proper exciples are poorly developed in all species of *Pleurotheliopsis.*

Among the three species cited by Müller Argoviensis in 1885, *Pleurothelium inclinatum* has perpendicular ostioles opening at the top of perithecia and produces brown muriform spores. Accordingly, it should be transferred from *Pleurotheliopsis* to *Anthracothecium*1). The other two species, *P. dissi-*

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1) **Anthracothecium inclinatum** (Müll. Arg.) Kashiwadani, comb. nov. Basionym: *Parathelium inclinatum* Müll. Arg. in Engler, Bot Jahrb. **6** : 387 (1885). Type collection: Cuba, C. Wright 28—lectotype in G.

mulans and *P. salvatum*, have characteristic features for *Pleurotheliopsis*. Of these two, *P. salvatum* is designated here as the lectotype of the present genus.

Pleurotheliopsis erigens Kashiwadani, sp. nov.

Thallus endophloeodes, crustaceus, uniformis, substrato arcte adhaerens, cinereo-stramineus, opacus, minute irregulariterque rimosus, late expansus, usque ad 8 cm diametero, sorediis isidiisque destitutus; stratum corticale subchondroideum, subdecolor, usque 130 μ crassum; gonidia sparsa ad *Trentepohliam* pertinentia. Perithecia simplicia, nigra, primum immersa, mox dein emergentia, incurvo-globosa, 3-4 mm diametero, ostiolis fuscis lateralibus. Perithecia ovalia, 0.4-0.6 mm alta; excipulum proprium indistinctum; involucrellum excipuli tegens et fere aeque crassum, 250-400 μ crassum; ostiolum tubiforme, stramineum, obliquum sed erigens sursum ad apicem, 300-400 μ longum, 170-180 μ diametero, texutula prope porum ostioli paraplectenchymatica; nucleus ovalis, hyalinus, J −, ca. 280 μ altus, 360-380 μ latus; asci cylindrici vel clavati; sporae 6-8-nae, fuscae, ellipsoideae, muriformae, 22-25 ×50-75 μ, loculis numerosis.

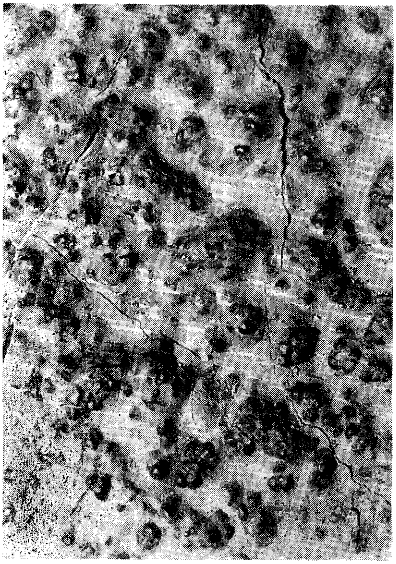

Fig. 1. The holotype specimen of *Pleurotheliopsis asahinae* Zahlbr. (×5).

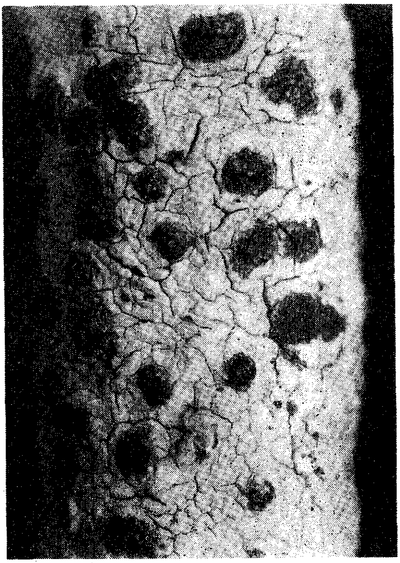

Fig. 2. The holotype specimen of *Pleurotheliopsis erigens* Kash. (×5).

Thallus and medulla K −, C −, P −.

Type collection. Mt. Chibusa, Haha-jima Island, The Bonin Islands, on bark of *Leucaena glauca*, elevation about 300 m. H. Kashiwadani 14103—holotype in TNS.

The first species of *Pleurotheliopsis* reported in eastern Asia was *P. asahinae* Zahlbr., which was based on a specimen collected by Y. Asahina in Formosa (Type collection: Soozan prope Taihoku, Y. Asahina 297—holotype in W). The holotype specimen (Fig. 1) has small clustered perithecia producing small spores of 13-16×28-32 μ in size. In contrast, the present new species (Fig. 2) has large simple perithecia, which produce large spores of 50-75 μ in length. Other characteristic features for *P. erigens* are the thick perithecial wall mainly composed of carbonized involucrellum (Fig. 3A), the long ostiolar tube of 300-400 μ in length, and the paraplectenchymatous tissue near the ostiolar pore (Fig. 3B). It may be confused with *P. salvata*, a species reported from Cuba. However, the perithecia of the latter species are small and are 0.4-0.6 mm in diameter and the spores are also small, being 13-15×37-42 μ in size.

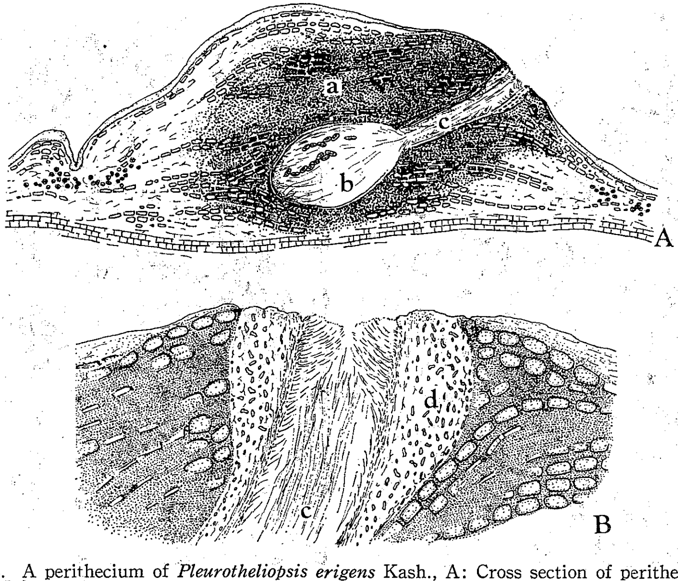

Fig. 3. A perithecium of *Pleurotheliopsis erigens* Kash., A: Cross section of perithecium, showing involucrellum (a), nucleus (b), and a long ostiolar tube (c) (×27). B: Upper part of ostiolar tube (c) with paraplectenchymatous tissue (d) (×54).

Although *Pleurotheliopsis erigens* is so far known only from the type locality, it may be rather common in evergreen forests in southern Japan.

Literature cited

Kurokawa, S. 1955. Some pyrenocarpous lichens from Chichibu (in Japanese). Bull. Chichibu Mus. Nat. Hist. **6**: 38-43. Müller Argoviensis 1877. Lichenologische Beiträge VI. Flora **60**: 471-478. —— 1885. Pyrenocarpeae Cubensis. Bot. Jahrb. **20**: 375-421. Zahlbruckner, A. 1922. Cat. Lich. Univ. **1**: 512. —— 1926. Lichenes (Flechten). B. Specieller Teil. In A. Engler & K. Prantl (ed.), Die natürlichen Pflanzenfamilien, 2 Aufl., **8**: 61-270, Leipzig.

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フシミゴケ属 (新称) (*Pleurotheliopsis*) はパラテリア科 (Paratheliaceae) に属する固着性の被果地衣で，熱帯から亜熱帯にかけて広く分布していると考えられるが，今までに6種が報告されているにすぎず，東南アジア産としては *P. asahinae* が台湾に産することが知られている。被子器は黒色で半ば地衣体に埋まり，その斜め上方でオスチオール (ostiole) が開口し，胞子は褐色で石垣状多室となる。外形や胞子の形状はオオホシミゴケ属 (*Parmentaria*) に似るが偽子座を作らない点で区別される。新種の *Pleurotheliopsis erigens* は筆者が小笠原諸島母島で採集したもので，直径 3〜4 mm の大きな被子器を有し，発達した被殻 (involucrellum) と大型の胞子 22-25×50-75 μ を持つ点で近縁種から区別される。また本属の基準種として *P. salvata* を選び，一方，従来本属として扱われていた *P. inclinatus* をニキビゴケ属 (*Anthracothecium*) に移した。

○オムナグサの名の由来 (前川文夫) Fumio Maekawa: Note on the Japanese name of *Drymaria* from Izu-shichito. この草はナデシコ科の *Drymaria cordata* Willd. var. *pacifica* Mizushima で，八丈島などの豆南列島に帰化した中南米系統のものであると牧野新日本植物図鑑 p. 147 に出ているが語源はでていない。小林亥一さんから「あるくみるきく」No. 133(1978, Ⅲ) を贈られてそれに載った同氏の「回想の青ケ島」p. 16 に“おムナさんとオムナ草の物語”という章があるのではじめてわかった。

おムナさんは女性で，小林さんが青ケ島で教員をしておられた際によく話をされたが，その話によると青ケ島の男性と再婚する際に八丈島から送られた荷物に木の臼があり，それの割目にこの草がはさまってついてきたという。それが青ケ島にひろがったのでこの名ができたそうだ。八丈島には帰化していたのがまじって入ったものらしいが珍らしいケースである。年代は恐らく明治の終りである。